GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated under the Federal law as a non-commercial institution for the increase of geographic knowledge and its popular diffusion.)

General Headquarters, Washington, D. C.

CONTENTS FOR WEEK OF OCTOBER 16, 1922. Vol. 1. No. 12.

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DUTCH SCHOOL CHILDREN

HOW TO OBTAIN THE BULLETIN

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Smyrna: Gray-Beard Among World's Cities

SMYRNA, captured, burned and massacred by the Turks, is one of the patriarchs among the world's famous cities.

Some American cities are proud of their age, feeling that a few centuries entitle them to distinction. In contrast to the newest oil town of Texas or Oklahoma, where corn stalks are probably still to be found along Main Street, Boston's 290-odd years indeed justify a feeling of maturity, while the four and a quarter centuries that look down on Santo Domingo entitle that first community to be established in the New World to its pride of seniority.

"Middle-Aged" London

But both of them are in the heyday of youth when compared with London, which probably has existed for close to 1900 years, or Rome with more than 26 centuries behind it. It is when the Near East is reached, however, that one finds cities that are truly old. Many, like Babylon and Thebes, Nineveh and Memphis, have crumbled away ages ago, but here and there one comes upon a living community whose beginnings are lost in the haze beyond the point where history began.

Such a gray-beard among cities is Smyrna which is believed to have already been long in existence at the time of the destruction of Troy, eleven centuries before Christ. In fact Smyrna is set up by some persons as a rival for Damascus as the oldest city in the world.

The original builders at Smyrna chose their site more happily perhaps than they knew. The forces of nature have been kind to the locality. Miletus and Ephesus were formidable rivals for many centuries, but their rivers finally choked their harbors with silt and the cities died. Smyrna had no stream of any consequence, and its excellent harbor—the best in Asia Minor—has continued to bear its heavy burden of commerce through the ages.

Crescent City of the East

Smyrna has a population close to that of New Orleans, and like the latter it is a "Crescent City," extending in a semi-circle about its bay. But while the American Crescent City is wholly flat, Smyrna has its rim of hills which, under the magic of Mediterranean skies and sunsets, invest the city with a beauty which detailed inspection does not verify. Its terraced outskirts are picturesque but they lack the striking quality of the terraces of Algiers, Hong Kong and Valparaiso.

Like a number of other cities of the Near East, Smyrna is a Babel. Even under the old Turkish Empire its population was composed of almost as many Greeks as Turks—a fact which is not strange when it is remembered that Smyrna first reached cityhood under Greek influence and remained Greek for many centuries successively under Ionians, Macedonians, Seleucids, and Byzantines. The city was wholly Greek for more than a millennium; it was nominally Turkish for 500 years, until the Treaty of Sevres was written.

OVERLOOKING THE HARBOR OF SMYRNA, CHIEF SEAPORT OF ASIA MINOR

With the consent of the Allied and Associated Powers, the Greeks occupied Smyrna and its contiguous territory. By the Treaty of Sevres, which the Turkish Government did not ratify and which will be modified as a result of recent political developments, the Greeks were given the right to administer this territory for a period of five years, at the end of which time a plebiscite was to be held to determine its ownership.

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"School Days" and Public School History

WHEN the sunburned vacation lad picks up his schoolbooks he recks little of the years of struggle and slow development that have given him the excellent public school system of today.

It took years to break down the prejudice against building up a free institution where the rich and the poor alike might obtain instruction, and in some of the colonies the fight was a more formidable one than in others. Massachusetts, always serious in purpose because her settlers had come primarily to make a permanent home in the new world, in 1647 passed a law requiring every town of fifty householders to maintain a teacher who could instruct pupils in reading and writing. More pretentious communities of one hundred householders should have a grammar school. Connecticut, too, fell in line with much the same law in 1650.

English and Dutch Disagree

New York was not so progressive in the early days because there was disagreement between the English and Dutch settlers as to how the school system should be worked out. New Jersey was wiser in her generation and in 1696 passed laws providing for the establishment of schools. The problem in Pennsylvania was much the same as that in New York, and in most of the Colonies the difficulties under which poor Ichabod Crane labored in getting his meals out among the patrons of his school existed as vivid realities, the support of the school as well as of the master depending almost entirely upon the generosity of the patrons.

In the South it may be said that there were virtually no public schools prior to the Revolution and few before the Civil War. While England still governed the Atlantic seaboard one of her kings, through the Commissioners for the Foreign Plantations, inquired into the state of education in his possessions. The reply of Governor William Berkeley, of Virginia, together with his notorious behavior in suppressing Bacon's rebellion, are perhaps the two things which make him remembered in the annals of history, "I thank God there are no free schools or printing presses, and I hope we shall not have, these hundred years." This attitude, of course, was not typical of all Virginians of Berkeley's day.

Connecticut a Pioneer

On the other hand, Connecticut's Governor proudly answered, "One-fourth the annual revenue of the colony is laid out in maintaining free schools for the education of our children." But in this connection it must always be remembered that as long as slavery existed in the South and the plantations were large and very far apart, the common school could not exist. And even today, as was the case after the emancipation of negroes, the South has her problem in that she maintains separate schools for the different elements of her population.

But from the time of Washington and Jefferson it gradually became apparent that the system would prove one of the most effective institutions in determining

Flavor of Old Turkey

Beside Greeks and Turks there are in the population large numbers of Armenians and Jews, and lesser groups of almost every other nationality under heaven. Quite a number of Europeans live in the city and there is a clean and fairly attractive European quarter with its modicum of hotels and theaters.

A striking thing about Smyrna since the World War and before the recent massacres is that Greek control seemed to have made so little difference in the life of the city. Its several hundred thousand Greeks and Turks lived in perfect amity and Turkish warships might have been seen flying their colors in the harbor among the warships of perhaps a dozen other nations.

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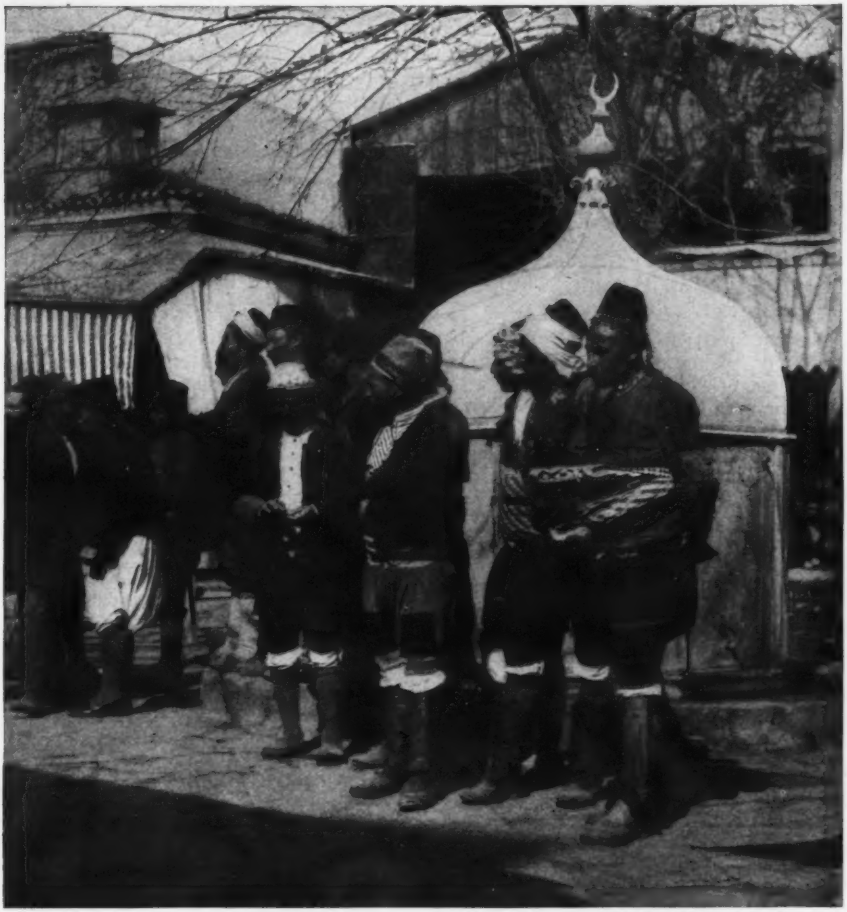

NATIVE STREET TYPES IN SMYRNA

With the exception of Damascus, Smyrna is the largest city in Turkish Asia. This, the chief seaport of Anatolia, has a normal population of more than 200,000, of which fully one-half are Greeks, 60,000 are Turks, 20,000 Jews, 12,000 Armenians, and 15,000 Europeans and Levantines. In November, 1914, diplomatic relations between the United States and Turkey were strained for a time, when a Smyrna shore battery fired on a launch from the U. S. S. Tennessee, which had been dispatched to European waters to assist American tourists in returning home. Turkey's explanation was that the shots were fired not with hostile intent, but to warn the launch that the harbor was mined.

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How Dr. Bell Came to Be an Inventor

THE fascinating story of how he came to be an inventor was charmingly recorded by the late Dr. Alexander Graham Bell in the course of his last published article, "Prehistoric Telephone Days," contained in the National Geographic Magazine for March, 1922.

Especial interest attaches to this article, not only because of its historic value as relating the steps leading up to the invention of the telephone, but because it is one of the few occasions when Dr. Bell, in his many writings, engaged in personal reminiscences.

"I will have to go back to my grandfather, Alexander Bell of London, England," Dr. Bell wrote.

"He was an elocutionist and a corrector of defective utterance. My grandfather took a great deal of interest in my education. The subjects in which I really excelled, such as music, botany, and natural history, formed no part of the school curriculum.

Music His Earliest Hobby

"Music especially was my earliest hobby. I learned to play the piano at such an early age that I have no recollection now of a time when I could not play.

"I am inclined to think, however, that my early passion for music had a good deal to do in preparing me for the scientific study of sound.

"As a child, I took a great deal of interest in flowers and plants and formed a large herbarium, arranged according to the Linnean system of botany.

"My collection of plants gradually gave way to collections of shells and birds' eggs. Then came butterflies and beetles and finally the skeletons of small animals, like frogs and toads, mice and rats.

Got Pig For Dissection

"On one occasion my father presented me with a dead suckling pig, and the 'distinguished professor of anatomy' was called upon for a lecture. So a special meeting of 'The Society for the Promotion of Fine Arts Among Boys' was held in my study, the attic of my father's house (13 South Charlotte Street, Edinburgh). This was sacred to me, and there my collections presented an imposing array of anatomical specimens.

"I can see in these natural-history collections a preparation for scientific work. The collection of material involved the close observation of the likenesses and differences of objects of very similar kind, and the orderly arrangement, as in a museum, stimulated the formation of generalizations of various kinds.

Had to Learn Shakespeare

"My grandfather was well known as a Shakespearean scholar and a public reader of Shakespeare's plays; so, of course, I had to make myself familiar with the plays of Shakespeare and commit to memory long passages from 'Hamlet,' 'Macbeth,' 'Julius Caesar,' and 'The Merchant of Venice.'

"He also gave me instruction in the mechanism of speech and permitted

the character of our national life. And that fact is probably what was in the mind of the Father of his Country when he said in his Farewell Address, "Promote then, as an object of primary importance, institutions for the general diffusion of knowledge. In proportion as the structure of a government gives force to public opinion, it is essential that public opinion be enlightened."

When common schools were first founded in America, it is doubtful whether any such far-seeing purpose was in the minds of the more pious among New Englanders, however. The Connecticut statute of 1650 does not fail to enlighten us as to the true purpose, for it states that, "It being one chief project of that old deluder, Satan, to keep men from a knowledge of the Scriptures . . . and that learning may not be buried in the grave of our forefathers," public schools should be provided for.

How European Schools Differ

They were democratic at least to the point of demanding that the same sort of training should be available to everyone—a definite departure from the system that had been gradually growing up in Germany and in other places on the continent, where even until the time of the World War, though the country is classed as one of the most literate, the boy or girl of the common family from the age of six went to the Volkeschule and the boy of the aristocratic family at the same age went to another institution. From the very first day they entered the portal of their respective schoolhouses the line of social distinction was sharply drawn. A professor of one of the most learned universities in that country remarked in astonishment upon the number of students in American high schools, "Such a number of students in German higher schools would be the gravest kind of a social menace."

Perhaps one of the most interesting phases and in a sense one of the most distinctive of the American system is that the schools in the various States have developed along independent and individual lines. As a consequence there has been a friendly rivalry, which, together with suggestions derived from the experience of each other, has made the American system of public schools such a vital factor in molding loyal American citizens and in placing the system itself in the forefront among public schools the world over.

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Hawaii: Paradise and Gibraltar of the Pacific

HAWAII, Territory of the United States, and most important strategically of the lands of the Pacific, is not alone interesting because of its military and naval value to Uncle Sam.

It is in many ways literally an island paradise. Scarcely anywhere else in the world may one roam through tropical jungles with never a thought of poisonous insects or snakes. Such creatures do not exist in these fair islands. Even poison ivy and similar plants are unknown. And though in the edge of the tropics, Hawaii has a cooler temperature by ten degrees than any other land in the same latitudes. Moreover, one may change his climate at will by a journey of a few miles; for the northeastern half of each island, swept by the trade winds, is rainy and heavily wooded, while just over the mountain ridge is a drier, warmer region.

Islands Proteges of Boston

In a way, the United States may well thank Boston and its daring traders and missionaries of the early days for the fact that Hawaii now flies the Stars and Stripes rather than the Tri-color or the British Union Jack. A Spanish navigator first discovered the islands in 1555 but his country laid no claim to them and they were practically forgotten. The British Captain Cook visited the Hawaiian group in 1778 and named them the Sandwich Islands. Still the islands were practically unknown. Then, following the close of the American Revolution, American ships began to sail the seven seas in growing numbers, and in 1789 the first ship flying the Stars and Stripes—from Boston—visited the Hawaiians. It was the first of many from the same port, carrying traders, whalers and adventurers; and soon the natives had learned of the republic on the continent to the east, and came to consider "United States" and "Boston" synonymous.

The Boston traders found each of the islands under a separate king, with two rival rulers on Hawaii, the largest of the islands. One of the latter obtained fire-arms and ammunition from the traders and got their assistance in building a "navy." With this American help he became "the Napoleon of the Pacific," conquered the other islands, and as Kamehameha I, ruled over the consolidated kingdom.

When Honolulu Was Gayer Than "Barbary Coast"

The Americans found the Hawaiian trade a good thing. They sold the king and his nobles everything from clothes and jewelry to billiard tables and steam yachts, and in return carted away shiploads of valuable sandalwood. Strong liquor was not forgotten among the imports, and in Honolulu among the naturally light-hearted natives the American sailors contributed to the creation of a gay Pacific resort, a sort of forerunner of San Francisco's Barbary Coast of later decades. Deserters from American ships, in the delightful haven of a barbarous paradise, helped to heighten the fame or the infamy of the Honolulu of those days. The situation became such that in 1820 President Monroe sent

me to be present at the instruction of some of his pupils, so that I might observe for myself his methods of correcting defective utterance.

"I have found it necessary to allude to my grandfather, and to his work in correcting defective utterance, not only on account of the influence he exerted upon my own life, but because the profession he founded became in process of time a family profession, which was handed down to his children and grandchildren. His two sons, for example, followed it.

Took up Study of Vibrations

"I took up the study of the nature of the vibrations going on in the air during the utterance of speech with the object of developing an apparatus that would enable my deaf pupils to see and recognize the forms of vibration characteristic of the various elements of speech. Various instruments were devised employing loaded stretched membranes, all based upon the well-known phonautograph of Leon Scott; and these experiments paved the way for the appearance of the first membrane telephone, the ancestor of all the telephones of today.

"When at last, after my arrival in America, I succeeded in vibrating tuning-forks, and tuned plates and reeds by electrical means, I made a number of electrical inventions based upon the utilization of musical notes as telegraphic signals; and these led gradually to the invention of the telephone itself.

Dr. Bell's First Invention

"I have often been asked whether I can recall the nature of my first invention and how I came to make it. So far as I can recollect, it came about in this way:

"When I was quite a little fellow, it so happened that my father had a pupil of about my own age with whom I used to play. He was the son of a Mr. Herdman, who owned large flour mills near Edinburgh, and, of course, I went over to the mills pretty often to play with him there. We romped about and got into all sorts of mischief, until at last one day Mr. Herdman called us into his office for a very serious talk.

" 'Why can't you boys do something useful,' he said, 'instead of always getting into mischief?'

"I mildly asked him to tell us some useful thing to do, and he replied by putting his arm into a bag and pulling out a handful of wheat. He showed us that the grains were covered with husks, and said: 'If you could only take the husks off that wheat you'd be doing something useful indeed.'

"That made rather an impression upon my mind, and I began to think, 'Why couldn't we take the husks off by brushing the seeds with a nailbrush?'

Mischief Makers Set to Work

"We tried the experiment and found it successful, although it involved a good deal of hard work from the two mischief-makers. We persevered, however, and soon had a nice little sample of cleaned wheat to show to Mr. Herdman. I then remembered that during our explorations at the mills we had come across a large vat or tank with a paddle-wheel arrangement in it that whirled round and round in a casing of quite rough material, brushes or fine wire netting, or something of that sort. If we could only put the wheat into that machine, I thought, the whirling of the paddle should cause the seeds to rub against the rough surface of the casing, and thus brush off the husks.

"It was a proud day for us when we boys marched into Mr. Herdman's office, presented him with our sample of cleaned wheat, and suggested paddling wheat in the dried-out vat.

" 'Why,' said Mr. Herdman, 'that's quite a good idea,' and he immediately ordered the experiment to be made. It was successful, and the process, I understand, or a substantially similar one, has been carried on at the mills ever since."

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Where the Radio Waves Come From

HOW FAR is Paris—London—Berlin?

The geography class answers in miles, but today the answer may well come in quarter-turns of a little black knob.

Radio is affecting geography as it is affecting many other fields. If you can hear voices and music and perhaps even the hum of traffic in the streets of a distant city, that city must straightway lose much of its remoteness.

The World's Longest Radio Waves

Even today, when radio telephony is in its infancy and radio telegraphy is merely a slightly older brother, our own country seems to be shrinking rapidly, and nations seem to be gravitating closer together. It is as though Europe and America, and presently the other continents, were being towed toward one another by tightening hawsers of ether waves. The capstan points for these ethereal cables—the great radio telegraph stations—take on a new geographic interest.

Wave lengths are not an infallible index to the power of a radio station nor to its sending range, but they indicate comparative strength at least roughly. The station which of all those in the world now regularly uses the longest waves—23,000 meters or approximately 14 miles—is near Bordeaux, France. It is the Lafayette Station, built by the United States Navy to facilitate America's part in the World War, and since sold to France. This station which until recently was unchallenged as the world's most powerful station, sends its telegraphic messages with ease—and practically instantaneously, of course—over the 4,000 miles of water and land that separate Bordeaux from Washington; and it has been heard occasionally in French Indo-China, 6,000 miles to the east.

Lafayette's title to first place is now challenged by a commercial station recently opened on Long Island, which, if it is not yet more powerful, will be when additional units are added. This station sends on the second longest wave in use, 19,000 meters or nearly 12 miles, and is employed for transmitting messages to Germany, about 4,000 miles away.

Communicates Over 5,000 Miles

Although the United States Navy's station at Annapolis, Md., is assigned a wave of 17,145 meters (roughly 10½ miles), the third longest in use, it is easily one of the world's most powerful stations. For that matter, so is the Navy station at Cavite, Philippine Islands, operating on 13,900 meters. The Navy depends on the Annapolis station—which is operated, incidentally, by remote control by means of keys in the Navy Building in Washington—to transmit messages day in and day out over a radius of about 5,500 miles. This range includes the extreme eastern end of the Mediterranean Sea, and the same territory can also be reached from the opposite direction by the Philippines station.

an agent to reside in Honolulu and look after American interests in regard to commerce and seamen.

A shipload of missionaries, also from Boston, arrived in the islands in 1820 much to the disgust of the traders as well as those who had deserted the sea to tread Hawaii's primrose path. The complaint of the traders was that the missionaries taught the natives "the value of things" and so made trading unprofitable. American ways and teachings at their best made a great impression on the more thoughtful Hawaiians and when they reshaped their government they made the Ten Commandments the basis of their laws.

Once Seized by British

More and more Americans visited and settled in the islands and the Hawaiians looked upon America as their best friend among the nations. When pioneers from the United States were pushing west toward California just before the Mexican War which added that State to the Union, a British naval commander in the Pacific, realizing the strategic importance of the Hawaiian group, seized the islands, but his country promptly disavowed his act. After some difficulties with France over the islands in the "forties" the United States declared a sort of Monroe Doctrine toward them. As early as 1851 the island government, fearing trouble with other nations, provisionally ceded the islands to the United States. But the cession was not accepted and numerous efforts to become a part of the United States were made in the following half century.

In 1887 the United States obtained a concession for the use of Pearl Harbor for a coaling station. When Queen Liliuokalani attempted to abolish the constitution in 1893, the constitutional party led by American settlers, brought about a revolution and dethroned her. One of the first acts of the provisional government was to apply for annexation to the United States. Germany was seizing islands right and left in the Pacific, and the Hawaiians wished to get under a sheltering wing. Politics in the United States delayed action and in the meantime the Republic of Hawaii was organized. Then in 1898, during the Spanish-American War, Congress suddenly voted to make Hawaii American territory.

60 Per Cent of Population Asiatics

Though the Hawaiian Islands are known as "the half-way house of the Pacific," in reality the distance from San Francisco to Honolulu is only about half that from Honolulu to Australia, the Philippines or Japan. All the islands are of volcanic origin, but coral has grown on the shores of many of them. The disintegrated lava has formed a rich soil which responds liberally to irrigation. Only Cuba and Java produce greater total crops of sugar, and the per acre yield of Hawaii is the greatest in the world—four tons without irrigation and six tons with. The sugar crop for the year ended June 30, 1920, was worth $78,500,000. The pineapple crop, second in importance, was valued at $18,500,000.

One of the most interesting features in regard to Hawaii is the racial make-up of its population. The country had an all-Hawaiian population believed to number several hundred thousands when it first became well known to Americans. The diseases of civilization, including measles, killed off a large part of them in the years following and in 1920 there were only 22,000 full blooded Hawaiians in the island and about 16,000 of mixed blood. The two groups constitute less than 15 per cent of the 255,912 people living in the islands in 1920. The Americans and northern Europeans made up about 10 per cent, the Portuguese approximately 9½ and the Porto Ricans and Spaniards about 2½. The total Caucasian population was thus little more than 20 per cent or only about one-fifth of the entire population. The Japanese population was 44 per cent and the Japanese, Chinese and Filipino population together, over 60 per cent.

The United States Navy has the most complete system of high power land stations for radio telegraphy of all naval establishments. Southward of the great Annapolis station it has among its larger units the sending plant at Cayey, Porto Rico, using a 10,510 meter wave, and another at Balboa, Canal Zone, sending on 10,110 meters. The eastern portion of the Pacific is covered from the continent by a station at San Diego, California and another on Puget Sound. The former uses waves of 9,800 meters and the latter of 7,100.

In the Hawaiian Islands the Navy has two sending stations, one using 11,500 meters and the other 8,875.

On Guam is a naval station which sends on 9,145 meters; and finally, in the Philippines is the 13,900 meter station which completes the Navy's band of radio stations around the world. In practically no place where its ships are likely to cruise will they be out of range of dots and dashes from one or more of the Navy's sending stations.

British Jumps Shorter

The British Navy does not maintain a system of land stations of its own but uses those of the British Post Office. These postal stations practically encircle the earth, but they do so in much smaller "jumps" than those of the United States Navy, and therefore use less powerful stations.

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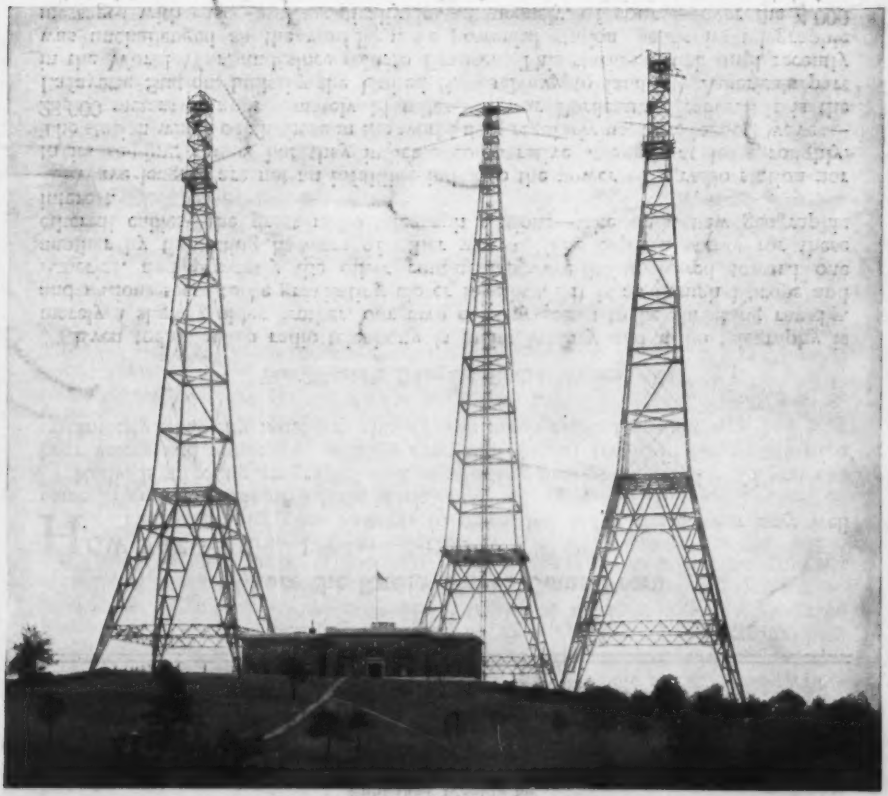

THE ARLINGTON WIRELESS STATION

It was from these towers that the human voice was heard nearly half way around the earth, when Mr. Espenschied, in Honolulu, overheard Arlington talking to Mr. Shreve, in Paris.